

Work-Order ID 121490

121490

Page 1

Thursday, June 26, 2014 3:01:21 PM

Item ID: D4871-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: End Fitting

Stop *NS2*

Start Date: 6/26/14 Start Qty: 90.00

90

Cust Item ID:

Required Date: 6/26/14 Req'd Qty: 90.00

90

Customer:

Reference:

Approvals: Process Plan: MLS Date: 14-06-27 Tooling:

Date:

Run Start *NR1*

QC: Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4871	REV A								

100

0.00

100

Outsource5

Memo

0.00

Outsource process - Machining

ISSUE P/O: 24906
POSSIBLE SUPPLIER:ATG

C OF C IS REQUIRED

CL 14/07/08 30

110

QC6- Inspect dimensions to drawing

0.00

110

QC

Memo

0.00

Quality Control

(29)

DAS
38
9-89

DEC 16 2014

150

0.00

150

Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O: 24906
LPI Per ASTM 1417 LEVEL 2
Certificate of conformaty is required

done @ ATG

CL 14/07/08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 121490

121490

Page 2

Thursday, June 26, 2014 3:01:21 PM

Item ID: D4871-1

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: End Fitting

Start Date: 6/26/14 Start Qty: 90.00

90

Cust Item ID:

Required Date: 6/26/14 Req'd Qty: 90.00

90

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

Receive & Inspect for Damage & Mat'l Certs

0.00

160

Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached

291x SP14-12-16

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

14/12/18

170 80 142B

DAS
96
9-09

DEC 17 2014

14-12-17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Picklist Print

July-31-14 11:23:03 AM

Page 1

Work Order ID: 121490

121490

Parent Item: D4871-1

D4871-1

Parent Item Name: End Fitting

Start Date: 6/26/14

Required Date: 6/26/14

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP REV:A NEW ISSUE 14-01-28 JLM VERIFIED BY:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4871-1P		Purchased	No				Each	0.0000		30			
D4871-1P									**				
End Fitting													
M174PH-H900R1.500		Purchased	No				f	130.2166		10			
M174PH-H900R1 500									**				
17-4SS H900 ROUND BAR 1.500													

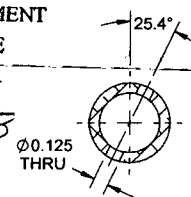
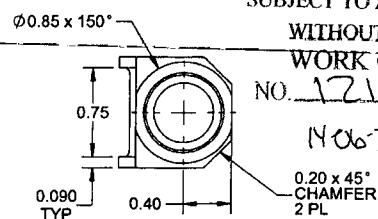
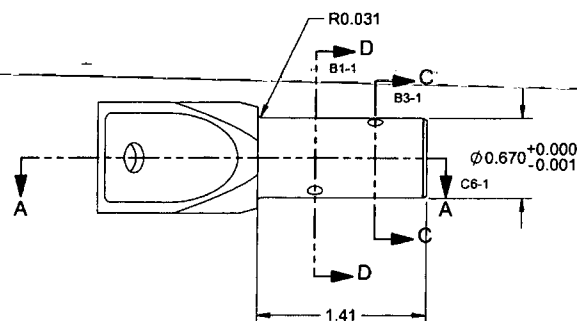
29 x SP14-12-16
CL14/07/08

Location	Loc Qty	Loc Code
MAT031	130.2166	
M128809	1:2583	
M129892	128.9583	

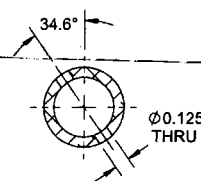
10



NO. 121490
1406-27 ^{ML5}



SECTION C-C B6-1



SECTION D-D B6-1

D4871-1 END FITTING

NOTES:

- 1) MATERIAL: 17-4 PH/S17400/TYPE 630 SS ROUND BAR, H900 CONDITION
PER AMS 5643/ASTM A564
DART SPEC M17-4-R
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.3.
ENGRAVE P/N USING 0.10 HIGH LETTERS TO A MAX. DEPTH OF 0.010
- 7) WEIGHT: 0.20 lbs
- 8) LIQUID PENETRANT INSPECT PER QSI 038 6.1.1 (ASTM E1417 LEVEL 2)

A	NEW ISSUE	RF	13.09.16
REV.	DESCRIPTION		BY DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D4871 TITLE END FITTING	REV. A
DRAWN	RF		SHEET 1 OF 2
CHECKED	HS		SCALE
MFG. APPR.	JLM		NTS
APPROVED	HS		
DE APPR.	DS		
DATE	13.12.09		

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 WRITTEN PERMISSION OF DART AEROSPACE LTD.



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO24906

Purchase Order Date 7/8/2014

PO Print Date 8/20/2014

Page Number 1 of 8

Order From :

VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

REUSED \$

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

FAVOR

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extend Pr
1	D4870-1P AS PER DWG D4870-1 REV. A B121621	End Fitting, Small	12/19/2014 Yes 12/19/2014	FN	24.00 Each	\$133.00	\$3,192
Line Total:							\$3,192
2	D4870-3P AS PER DWG D4870-3 REV. A B121535	End Fitting, Large	12/19/2014 Yes 12/19/2014	FN	24.00 Each	\$133.00	\$3,192
Line Total:							\$3,192
3	D4871-1P AS PER DWG D4871-1 REV. A B121490	End Fitting	12/19/2014 Yes 12/19/2014	FN	30.00 Each	\$130.00	\$3,900

Recd 291X
SP14-12-16

Note:

8/20/2014



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 909316

Date: 16-Dec-14

To

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

Ship To

CHANTAL LAVOIE
DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
24 ea	Part: D4870-1P END FITTING, SMALL Job: 16636	PO: PO24906	Rev: A Line: 1
16 ea	Part: D4805-5P END FITTING Job: 16649	PO: PO24906	Rev: A Line: 14
18 ea	Part: D4869-3P END FITTING, EYE Job: 16650	PO: PO24906	Rev: A Line: 15
30 ea	Part: D4805-3P END FITTING Job: 16652	PO: PO24906	Rev: A Line: 17
10 ea	Part: D4808-1P ROD END Job: 16653	PO: PO24906	Rev: A Line: 18
24 ea	Part: D4869-1P END FITTING, EYE Job: 16654	PO: PO24906	Rev: A Line: 19
24 ea	Part: D4870-3P END FITTING, LARGE Job: 16637	PO: PO24906	Rev: A Line: 2
✓ 29 ea	Part: D4871-1P END FITTING Job: 16638	PO: PO24906	Rev: A Line: 3
30	Part: D4871-3P		Rev: A

SP14-12-16



F.A.I.

First Article Inspection Report

#

523

Requesting Company:	Dart Aerospace	PO#:	PO24906	Line:	3	Qty:	30
Part Number:	D4871-1P	Rev:	A	Part Description:	End Fitting		
FAI Supplied by:	A.T.G. Industries Inc.	FAI Prepared by:	Emily Louis-Seize	Date:	July 14, 2014		
Qty Inspected:	30	FAI Inspected by:	Mike Csontos	Date:	December 5, 2014		

Material and/or Special Processes

Type	Description	Specification Number/Code	Certificate of Conformance Number:
Material	17-4SS H900		Supplied by Customer
Special Process	Liquid Penetrant	QSI 038 6.1.1 (ASTM E1417 Level 2)	PO#: 20140501

Inspection Information and Results

Char#	Location	Requirement	Result	UoM	Pass/Fail	Measurement Equipment:	Operation #:
1	D7	2.75	2.745	inch	Pass	Vernier Caliper	2
2	D7	1.579±.005	1.578	inch	Pass	Height Gauge	4
3	D7	1.10	1.109	inch	Pass	Height Gauge	2
4	D7	R.06	R.06	inch	Pass	Radius Gauge	3
5	D6	.500	.500	inch	Pass	Height Gauge	4
6	D6	.43	.432	inch	Pass	Height Gauge	4
7	D6	.030	.030	inch	Pass	Comparator	1
8	D6	.017	.015	inch	Pass	Comparator	1
9	D5	Ø.500	Ø.503	inch	Pass	Gauge Pin	1
10	C6	.400	.400	inch	Pass	Height Gauge	1
11	C6	1.51	1.511	inch	Pass	Depth Micrometer	1
12	C7	.751	.748	inch	Pass	Height Gauge	3
13	C7	.09 REF	.099	inch	Pass	Depth Micrometer	1

Inspection Information and Results

Char#	Location	Requirement	Result	UoM	Pass/Fail	Measurement Equipment:	Operation #:
14	C7	R.13	R.125	inch	Pass	Radius Gauge	2
15	C8	.30	.302	inch	Pass	Comparator	2
16	C8	.083	.083	inch	Pass	Micrometer	3
17	C8	50.1°	50.1°	degree	Pass	Comparator	2
18	C8	.375	.370	inch	Pass	Height Gauge	3
19	C8	R.50	R.50	inch	Pass	Radius Gauge	2
20	D4	Ø.250/.249	Ø.249	inch	Pass	Gauge Pin	2
21	C4	.376 REF	.377	inch	Pass	Micrometer	2
22	C4	.93	.93	inch	Pass	Vernier Caliper	2
23	C2	.10	.106	inch	Pass	Vernier Caliper	2
24	C2	Note 6	D4871-1	n/a	Pass	Visual	2
25	C6	R.031	R.030	inch	Pass	Comparator	1
26	B5	Ø.670+.000/-.001	Ø.6695	inch	Pass	Micrometer	1
27	B6	1.41	1.409	inch	Pass	Vernier Caliper	1
28	B5	Ø.85 x 150°	Ø.85 x 150°	inch/degree	Pass	Comparator	1
29	B4	.20 x 45° Chamfer	.22 x 45°	inch/degree	Pass	Comparator	2
30	B4	.40	.40	inch	Pass	Height Gauge	2
31	B5	.090 TYP	.091	inch	Pass	Micrometer	3
32	B5	.75	.749	inch	Pass	Vernier Caliper	3
33	B3	25.4°	25.4°	degree	Pass	Comparator	4
34	B3	Ø.125 thru	Ø.125	inch	Pass	Gauge Pin	4
35	B2	34.6°	34.6°	degree	Pass	Comparator	4
36	B1	Ø.125 thru	Ø.125	inch	Pass	Gauge Pin	4

First Article Inspection Report Approved and
Completed in Full by:

M. Cortez

Date:

15-Dec-14



skyservice Work Order Traveler



Sky Service F.B.O. Inc.

DOT APP 53-89 / EASA 145.7142 / BDA AMO 355

WO #: MWO23016	Customer: ATG Industries Inc	Dept: NDT YUL	Reference: 20140501
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 3

Work Required:



CARRY OUT NDT ON 29 END FITTING P/N D4871-1P AS PER PO: 20140501

Action Taken:	Date:	Initial/Stamp:
LPI C/O IAW ASTM E-1417M-13 ***NO CRACK FOUND*** PEN.(ZL-37 , B#10A070), DEV.(SKD-S2,B#13D14k) , EMU.(ZR-10B,B#10A074).	DEC 10 2014	 

Description	Location	P/N	Qty	Batch	S/N Off	S/N On

COPY

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature: 	ACA/SCA Stamp 	Date: DEC 10 2014
Name: RAFIK MELIKIAN		